PCN10

COMPARISON OF COSTS AND EFFECTS OF PROPHYLACTIC CLODRONATE FOR THE PREVENTION OF SKELETAL RELATED EVENTS IN PATIENTS WITH ADVANCED BREAST CANCER IN POLAND

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OBJECTIVE: to estimate the costs and effects of clodronate vs placebo in prevention of bone complications in metastatic breast cancer in Poland. **METHODS:** The model for the Polish health care context was developed, based on the use of clinical data from literature and local data on health care resource utilization and unit cost. Only direct medical costs are analyzed. The perspective of health-care payers and time horizon of 18 months were taken. In the cost-effectiveness analysis the primary clinical outcomes for measuring success in the analysis were the avoided skeletal related events (SRE), which were defined as pathological fractures, irradiation and episodes of hypercalcaemia. The one-way sensitivity analysis and threshold analysis were performed. **RESULTS:** The costs of avoiding of SRE for clodronate vs placebo was 5292–5404 PLN. This value was lower then costs of treatment of pathological fractures (7,000–40,000 PLN) and higher than treatment of hypercalcaemia or irradiation episode (2,200–2,600 PLN). The results were most sensitive to the costs of treatment of pathologic fractures and number of SRE avoided. **CONCLUSION:** Clodronate therapy for advanced breast cancer offers substantial benefit at a reasonable cost to the Polish health care system, but in comparison to pamidronate is less cost-effective.

PCN11

PAYER COSTS OF PANCREATIC CANCER IN A NONELDERLY MEDICAID POPULATION

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OBJECTIVE: The purpose of this study was to estimate the payer costs of pancreatic cancer for a nonelderly Medicaid population and to provide a breakdown of costs by type of care. **METHODS:** We performed a retrospective analysis of California Medicaid (Medi-Cal) data linked by encrypted social security number to the California Department of Health Services Vital Statistics database. We limited the sample to patients who were continuously enrolled in Medi-Cal from six months prior to their first pancreatic cancer diagnosis through death or through December 31, 1998, whichever occurred first. Patients must have had at least two diagnoses of pancreatic cancer or one diagnosis and a cause of death of pancreatic cancer. We excluded elderly patients (≥65 years) because most of their medical bills are paid by Medicare not Medicaid, which is a limitation in these data. We estimated costs using the Kaplan-Meier Sample Average, which results in consistent cost estimates if the censoring mechanism is independent of survival and cost, a condition that is satisfied in the present analysis. All cost estimates were expressed in 1999 U.S. dollars. **RESULTS:** Of 410 Medi-Cal patients meeting the study inclusion criteria, the mean cost per patient for all services was $19,191. The mean inpatient facility cost (including inpatient chemotherapy) was $11,435 (59.6% of total costs) and the mean cost of outpatient clinic visits was $2,416 (12.6% of total costs). The mean cost of hospital outpatient visits and hospice care was $828 (4.3% of total costs) and $1,096 (5.7% of total costs), respectively. The mean cost of outpatient chemotherapy agents was just $178 (0.9% of total costs). Only 105 patients (25.6% of our sample) received outpatient chemotherapy. **CONCLUSION:** This analysis presents estimates of the payer cost of pancreatic cancer among nonelderly Medi-Cal patients. Similar examination of costs among elderly patients is warranted.

PCN12

CHANGES IN OUTPATIENT DRUG COSTS FOR CANCER PATIENTS, 1995 vs 1998

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OBJECTIVE: To quantify and characterize trends in outpatient pharmaceutical expenditures in-patients diagnosed with cancer. **METHODS:** Medical and pharmaceutical costs (claims) from a large US managed care population were utilized. Members with a confirmed diagnosis of cancer were identified for the years 1995 and 1998. Transaction costs were compiled for all outpatient drugs, and compared between years. Drugs were grouped into four categories: (1) chemotherapy; (2) chemotherapy adjuncts (i.e., drugs which enhanced or extended chemotherapy treatment); (3) supportive therapy (i.e., drugs to treat complications or symptoms related to cancer); and (4) drugs for routine patient conditions unrelated to cancer. **RESULTS:** There were $17.9 million in claims for drugs in 1995, rising to $27.9 million in 1998, an increase of over $10 million. Chemotherapy was the largest driver of the cost increase, representing 52.4% of the total increase ($5.3 million). Routine patient drugs unrelated to their cancer therapy were the second most important cost driver, accounting for 31% of the increase ($3.1 m). Supportive therapies were third, and accounted for 12% of the total increase ($1.2 m): among this group, antidepressants showed the largest increase in cost, followed by gastrointestinal agents and analgesics. Chemotherapy adjuncts as a class had the smallest impact on total cost increases—4.8% of the total increase, or $0.5

million. Within the adjunct group, growth factors (at 4.2%) accounted for the largest proportion of the cost increase, while antiemetics (the largest dollar amount) decreased between 1995 and 1998. **CONCLUSION:** Chemotherapy accounted for the majority of the total increase in pharmaceutical cost in-patients with cancer. Drugs used in the treatment of routine conditions (i.e., not cancer-related) were the second largest cost drivers. Supportive therapy was the third largest cost driver. Of the groups studied, chemotherapy adjuncts had the smallest impact on total drug cost increases.

PCN13

MANAGEMENT OF LUNG CANCER IN FRANCE

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OBJECTIVE: To determine treatment patterns and cost associated with the management of lung cancer in France from the perspective of French hospitals by means of a retrospective chart review. **METHODS:** Estimates were based on a retrospective review of medical care consumption in patients diagnosed with either small cell lung cancer (SCLC) or non small cell lung cancer (NSCLC) between 06/98 and 06/99 and followed until 09/99. Quotas were defined by type and stage of lung cancer according to available epidemiological data. Patients were identified at a representative sample of 11 hospital centres in France. Costs were estimated from date of diagnosis until death or 16 months follow-up. Costs were adjusted for censoring by means of a method described by Lin et al. (Biometrics, 1997). **RESULTS:** 439 patient charts were reviewed, including 92 SCLC and 357 NSCLC. Mean age at diagnosis was 62, sex ratio was 82% male, 18% female. Survival at 12 months was 36% for SCLC and ranged between 79% and 32% for NSCLC depending on stage at diagnosis. All patients with limited-stage SCLC received chemotherapy and 84% benefited from radiotherapy. Of patients with disseminated SCLC, 91% received chemotherapy and 49% palliative radiotherapy. Patients with stage I–III NSCLC were treated with surgery (43%), chemotherapy (71%) and/or radiotherapy (73%). Stage IV NSCLC patients had surgery (15%) and/or chemotherapy (91%) and/or radiotherapy (65%). Preliminary analyses indicate that the management of adverse events accounted for more than 25% of the total cost. **CONCLUSION:** Considering the high cost management of adverse events and radiotherapy, new chemotherapy treatments increasing overall survival with acceptable toxicity profile and decreasing radiotherapy acts, would have a significant economic value. Updated results will be presented.

PCN14

THE USE OF TRANSDERMAL FENTANYL (FEN) VERSUS MORPHINE (MOR) IN CANCER PAIN PATIENTS IN ISRAEL

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OBJECTIVES: To study the cost of cancer pain management in the Maccabi database. This database delivers information on diagnosis, treatment and costs. Costs were compared for patients that were on MOR and switched to FEN and costs were assessed relative to total treatment cost. **METHODS:** A selection was made of all cancer patients (N = 1082) treated with strong opioids during 1997–1998. Fifty-two percent were women and average age 62 years. Fifteen percent of the patients had skin cancer and 10% was reported with lung cancer. Patients were divided in four different groups based upon the sequence of strong opioid use: FF is the group that was on FEN, MF was the group that started on MOR but switched to FEN, FM vice versa and MM were on MOR throughout. **RESULTS:** In the MF group significantly fewer infections and abdominal pain were reported by patients after switching to FEN. Also a reduction in drugs used was observed after switching to FEN: laxatives, H2-blockers, anti-emetics, anti-diarrhea, antibiotics, NSAIDs and other pain treatments. The total mean daily drug acquisition cost was 162 New Israelian Shekel (NIS) for the MOR period and 115 NIS while on FEN, a reduction resulting from reduced need for concomittant medication. The cost for pain management accounted for 3.1% (MM) to 6.7% (MF) of the total expenses, indicating the relatively low impact the choice of pain strategy has on total cost. **CONCLUSION:** This database analysis indicates that FEN treatment generates fewer costs compared to MOR treatment in patients switching from MOR to FEN. Without an adequate control group it is difficult to determine whether this reflects resource utilization related to the selected pain treatment or changed medical practice in the course of cancer treatment. Overall the cost of pain management is low relative to the total cost for these patients.

PCN15

A METHODOLOGY FOR IMPLEMENTING QUALITY-ADJUSTED DISEASE FREE SURVIVAL (QADFS) WITH MULTIDIMENSIONAL QUALITY OF LIFE (QoL) INSTRUMENTS IN CANCER TRIALS

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QoL is an important factor in the evaluation of new cancer therapies. Conventional analyses of responses in therapeutic trials fail to account for treatment effects on patient's perception of their health status and their general well being. **OBJECTIVE:** To develop a methodology for